Filed: December 23, 2005

#### AMENDMENTS TO THE CLAIMS

1. (Previously presented) A compound of the formula I or a pharmaceutically acceptable salt thereof,

formula I

$$R_4$$
 $R_5$ 
 $R_2$ 
 $R_1$ 
 $R_3$ 
 $R_3$ 

wherein R<sup>1</sup> is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, alkyloxy, alkyloxyalkyl, alkylthioalkyl, alkyloxycarbonyl, alkylthiocarbonyl, alkanoyl, cycloalkylalkyl, cycloalkylcarbonyl, cycloalkylalkanoyl, cycloalkylthiocarbonyl, cycloalkylalkoxycarbonyl, cycloalkylalkoxythiocarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl, arylcarbonyloxyalkyl, cycloalkylcarbonyloxyalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, aryloxycarbonyl, arylthiocarbonyl, aralkoxycarbonyl, arylalkylthiocarbonyl, aryloxyalkyl, arylthioalkyl, haloalkyl, hydroxyalkyl, aralkanoyl, aroyl, aryloxycarbonylalkyl, aryloxyalkanoyl, carboxyl, formyl, alkenylcarbonyl, alkynylcarbonyl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>aryl, Het<sup>1</sup>aralkyl, Het<sup>1</sup>cycloalkyl, Het<sup>1</sup>carbonyl, Het<sup>1</sup>alkoxycarbonyl, Het<sup>1</sup>alkylthiocarbonyl, Het<sup>1</sup>oxycarbonyl, Het<sup>1</sup>aralkanoyl, Het<sup>1</sup>aryloxyalkyl, Het<sup>1</sup>alkanoyl, Het<sup>1</sup>alkyloxyalkyl, Het<sup>1</sup>thiocarbonyl, Het<sup>1</sup>arylthioalkyl, Het<sup>1</sup>aryloxycarbonyl, Het<sup>1</sup>aralkoxycarbonyl, Het<sup>1</sup>aroyl, Het<sup>1</sup>oxyalkylcarbonyl, Het<sup>1</sup>aryloxyalkylcarbonyl, Het<sup>1</sup>carbonyloxyalkyl, Het<sup>1</sup>alkyloxyalkylcarbonyl, Het<sup>1</sup>aralkylcarbonyloxyalkyl, Het<sup>2</sup>alkyl; Het<sup>2</sup>oxyalkyl, Het<sup>1</sup>alkylcarbonyloxyalkyl, Het<sup>2</sup>alkyloxyalkyl, Het<sup>2</sup>aralkyl, Het<sup>2</sup>carbonyl, Het<sup>2</sup>oxycarbonyl, Het<sup>2</sup>thiocarbonyl, Het<sup>2</sup>alkanoyl, Het<sup>2</sup>alkoxycarbonyl, Het<sup>2</sup>aralkanovl, Het<sup>2</sup>aralkoxycarbonyl, Het<sup>2</sup>alkylthiocarbonyl, Het<sup>2</sup>aryloxycarbonyl, Het<sup>2</sup>aryloxyalkyl, Het<sup>2</sup>arylthioalkyl, Het<sup>2</sup>oxyalkylcarbonyl, Het<sup>2</sup>aryloxyalkylcarbonyl, Het<sup>2</sup>carbonyloxyalkyl, Het<sup>2</sup>alkyloxyalkylcarbonyl, Het<sup>2</sup>alkylcarbonyloxyalkyl, Het<sup>2</sup>aralkylcarbonyloxyalkyl, cyano, aminocarbonyl, aminoalkanoyl, aminoalkyl, CR<sup>6</sup>=NR<sup>7</sup> and CR<sup>6</sup>=N(OR<sup>7</sup>), with R<sup>6</sup> and R<sup>7</sup> being independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het¹ alkyl, Het¹ aryl, alkenyl, alkynyl,

Filed: December 23, 2005

aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;

wherein R<sup>2</sup> and R<sup>3</sup> are independently selected from the group consisting of hydroxyl, alkyloxy, alkylsilyloxy, arylsilyloxy, alkyloxyalkyloxy, cycloalkyloxy cycloalkylalkyloxy, aryloxyalkyloxy, silyloxy, alkylcarbonyloxy, arylcarbonyloxy, cycloalkylcarbonyloxy, haloalkyloxy, hydroxyalkyloxy, aralkanoyloxy, aroyloxy, aryloxycarbonylalkyloxy, formyloxy, Het<sup>1</sup>alkyloxy, Het<sup>1</sup>oxy, Het<sup>1</sup>oxyalkyloxy, Het<sup>1</sup>aryloxy, Het<sup>1</sup>aralkyloxy, Het<sup>1</sup>cycloalkyloxy, Het<sup>1</sup>carbonyloxy, Het<sup>1</sup>oxycarbonyloxy, Het<sup>1</sup>alkanoyloxy, Het<sup>1</sup>aralkanovloxy, Het<sup>1</sup>aryloxyalkyloxy, Het<sup>2</sup>aroyl, Het<sup>2</sup>oxy, Het<sup>2</sup>alkyloxy, Het<sup>2</sup>oxyalkyloxy, Het<sup>2</sup>aralkyloxy, Het<sup>2</sup>cycloalkyloxy, Het<sup>2</sup>alkanoyloxy, Het<sup>2</sup>aralkanoyloxy, Het<sup>2</sup>carbonyloxyl, Het<sup>2</sup>aryloxy, and Het<sup>2</sup>aryloxyalkyloxy,

wherein R<sup>1</sup> R<sup>2</sup> and R<sup>3</sup> are unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, aralkylthio, arylthioalkoxy, arylthioalkylamino, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>, S(O)R<sup>8</sup>, SO<sub>2</sub>R<sup>8</sup>, CR<sup>8</sup>=N(OR<sup>9</sup>), N<sub>3</sub>, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup>, N(OH)R<sup>8</sup>, C(O)R<sup>8</sup>, C(S)R<sup>8</sup>, CO<sub>2</sub>R<sup>8</sup>, C(O)SR<sup>8</sup>,  $C(O)NR^8R^9$ ,  $C(S)NR^8R^9$ ,  $C(O)N(OH)R^9$ ,  $C(S)N(OH)R^8$ ,  $NR^8C(O)R^9$ ,  $NR^8C(S)R^9$ , N(OH)C(O)R<sup>9</sup>, N(OH)C(S)R<sup>8</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>9</sup>, NR<sup>8</sup>C(O)NR<sup>9</sup>R<sup>10</sup>, NR<sup>8</sup>C(S)NR<sup>9</sup>R<sup>10</sup>, N(OH)CO<sub>2</sub>R<sup>8</sup>,  $NR^8C(O)SR^9$ ,  $N(OH)C(O)NR^8R^9$ ,  $N(OH)C(S)NR^8R^9$ ,  $NR^8C(O)N(OH)R^9$ ,  $NR^8C(S)N(OH)R^9$ , NR<sup>8</sup>SO<sub>2</sub>R<sup>9</sup>, NHSO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl,

Filed: December 23, 2005

alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;

wherein R<sup>4</sup> is selected from the group consisting of oxo, hydroxyl, alkyl, alkenyl, alkynyl, alkanediyl, alkyloxy, alklylthio, alkylamino, alkyloxyalkyl, arylcarbonylalkyl, alkylcarbonylalkyl, alkanoyl, cycloalkylcarbonylalkyl,

cycloalkyl, cycloalkylakyl, cycloalkyl, cy aralkyl, arylalkenyl, arylcarbonyloxy, aryloxycarbonyloxy, aralkoxycarbonyloxy, aryloxyalkyl, haloalkyloxy, haloalkylthio, haloalkylamino, hydroxyalkyl, aralkanoyl, aryloxycarbonylalkyl, aryloxyalkanoyl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>oxy, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>aryl, Het<sup>1</sup> aralkyl, Het<sup>1</sup> cycloalkyl, Het<sup>1</sup> aryloxyalkyl, Het<sup>1</sup> aroyl, Het<sup>2</sup> oxy, Het<sup>2</sup> alkyl; Het<sup>2</sup> oxyalkyl, Het<sup>2</sup>aralkyl, Het<sup>2</sup>cycloalkyl, Het<sup>2</sup>aryl, Het<sup>2</sup>alkanoyl, Het<sup>2</sup>aralkanoyl, Het<sup>2</sup>aroyl, Het<sup>2</sup>aryloxyalkyl, aminocarbonyl, aminoalkanoyl, and aminoalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylthioalkylamino, aralkylthio, arylaminoalkylamino, arylthioalkoxy, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup> alkylthio, Het<sup>2</sup> alkylthio, Het<sup>1</sup> oxy and Het<sup>2</sup> oxy, OR<sup>11</sup>, SR<sup>11</sup>, SO<sub>2</sub>NR<sup>11</sup>R<sup>12</sup>, SO<sub>2</sub>N(OH)R<sup>11</sup>, CN,  $CR^{11}=NR^{12}$ ,  $S(O)R^{11}$ ,  $SO_2R^{11}$ ,  $CR^{11}=N(OR^{12})$ ,  $N_3$ ,  $NO_2$ ,  $NR^{11}R^{12}$ ,  $N(OH)R^{11}$ ,  $C(O)R^{11}$ ,  $C(S)R^{11}$ ,  $CO_2R^{11}$ ,  $C(O)SR^{11}$ ,  $C(O)NR^{11}R^{12}$ ,  $C(S)NR^{11}R^{12}$ ,  $C(O)N(OH)R^{12}$ ,  $C(S)N(OH)R^{11}$ ,  $NR^{11}C(O)R^{12}$ ,  $NR^{11}C(S)R^{12}$ ,  $N(OH)C(O)R^{12}$ ,  $N(OH)C(S)R^{11}$ ,  $NR^{11}CO_2R^{12}$ ,  $NR^{11}C(O)NR^{12}R^{13}$ ,  $NR^{11}C(S)NR^{12}R^{13}$ ,  $N(OH)CO_2R^{11}$ ,  $NR^{11}C(O)SR^{12}$ ,  $N(OH)C(O)NR^{11}R^{12}$ , and N(OH)C(S)NR<sup>11</sup>R<sup>12</sup>, NR<sup>11</sup>C(O)N(OH)R<sup>12</sup>, NR<sup>11</sup>C(S)N(OH)R<sup>12</sup>, NR<sup>11</sup>SO<sub>2</sub>R<sup>12</sup>, NHSO<sub>2</sub>NR<sup>11</sup>R<sup>12</sup>, NR<sup>11</sup>SO<sub>2</sub>NHR<sup>12</sup>, P(O)(OR<sup>11</sup>)(OR<sup>12</sup>), wherein t is an integer between 1 and 2, R<sup>11</sup>, R<sup>12</sup> and R<sup>13</sup> are each independently selected from the group consisting of hydrogen, alkyl, alkenyl, and alkynyl; and

Filed: December 23, 2005

wherein R<sup>5</sup> is selected from the group consisting of hydrogen, oxo, hydroxyl, alkyl, alkenyl, alkynyl, alkanediyl, alkyloxy, alkyloxyalkyl, arylcarbonylalkyl, alkylcarbonylalkyl, alkanoyl, cycloalkylcarbonylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkylalkanoyl, arylalkenyl, arylcarbonyloxy, aryloxycarbonyloxy, aralkoxycarbonyloxy, aryloxyalkyl, haloalkyl, hydroxyalkyl, aralkanoyl, aryloxycarbonylalkyl, aryloxyalkanoyl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>oxy, Het<sup>1</sup>oxvalkyl, Het<sup>1</sup>arvl, Het<sup>1</sup>aralkyl, Het<sup>1</sup>cycloalkyl, Het<sup>1</sup>aryloxyalkyl, Het<sup>1</sup>aroyl, Het<sup>2</sup>oxy, Het<sup>2</sup>alkyl; Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>aralkyl, Het<sup>2</sup>cycloalkyl, Het<sup>2</sup>aryl, Het<sup>2</sup>alkanoyl, Het<sup>2</sup>aralkanoyl, Het<sup>2</sup>aroyl, Het<sup>2</sup>aryloxyalkyl, aminocarbonyl, aminoalkanoyl, and aminoalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het thio, Het thio, Het alkylthio, Het alkylthio, Het oxy and Het oxy, OR 11, SR 11, SO<sub>2</sub>NR 11R 12,  $SO_2N(OH)R^{11}$ , CN,  $CR^{11}=NR^{12}$ ,  $S(O)R^{11}$ ,  $SO_2R^{11}$ ,  $CR^{11}=N(OR^{12})$ ,  $N_3$ ,  $NO_2$ ,  $NR^{11}R^{12}$ ,  $N(OH)R^{11}$ ,  $C(O)R^{11}$ ,  $C(S)R^{11}$ ,  $CO_2R^{11}$ ,  $C(O)SR^{11}$ ,  $C(O)NR^{11}R^{12}$ ,  $C(S)NR^{11}R^{12}$ ,  $C(O)N(OH)R^{12}$ ,  $C(S)N(OH)R^{11}$ ,  $NR^{11}C(O)R^{12}$ ,  $NR^{11}C(S)R^{12}$ ,  $N(OH)C(O)R^{12}$ ,  $N(OH)C(S)R^{11}$ ,  $NR^{11}CO_2R^{12}$ ,  $NR^{11}C(S)NR^{12}R^{13}$ ,  $N(OH)CO_2R^{11}$ ,  $NR^{11}C(O)NR^{12}R^{13}$ ,  $NR^{11}C(O)SR^{12}$ and  $N(OH)C(O)NR^{11}R^{12}$ ,  $N(OH)C(S)NR^{11}R^{12}$ ,  $NR^{11}C(O)N(OH)R^{12}$ ,  $NR^{11}C(S)N(OH)R^{12}$ , NR<sup>11</sup>SO<sub>2</sub>R<sup>12</sup>, NHSO<sub>2</sub>NR<sup>11</sup>R<sup>12</sup>, NR<sup>11</sup>SO<sub>2</sub>NHR<sup>12</sup>, and P(O)(OR<sup>11</sup>)(OR<sup>12</sup>), wherein t is an integer between 1 and 2, R<sup>11</sup>, R<sup>12</sup> and R<sup>13</sup> are each independently selected from the group consisting of hydrogen, alkyl, alkenyl, and alkynyl;

wherein Het<sup>1</sup> is defined as a saturated or partially unsaturated monocyclic, bicyclic or polycyclic heterocycle consisting of 3 to 12 ring members which comprise one or more heteroatom ring members selected from nitrogen, oxygen or sulfur, optionally substituted on one or more carbon atoms by alkyl, alkyloxy, halogen, hydroxyl, oxo, optionally mono- or disubstituted amino, nitro,

Filed: December 23, 2005

cyano, haloalkyl, carboxyl, alkoxycarbonyl cycloalkyl, optionally mono-or disubstituted aminocarbonyl, methylthio, methylsulfonyl, aryl and a saturated or partially unsaturated monocyclic, bicyclic or tricyclic heterocycle consisting of 3 to 12 ring members which contain one or more heteroatom ring members selected from nitrogen, oxygen or sulfur and whereby the optional substituents on any amino function are independently selected from alkyl, alkyloxy, Het<sup>2</sup>, Het<sup>2</sup>alkyl, Het<sup>2</sup>oxy, Het<sup>2</sup>oxyalkyl, aryl, aryloxy, aryloxyalkyl, aralkyl, alkyloxycarbonylamino, amino and aminoalkyl whereby each of the amino groups may optionally be mono-or disubstituted with alkyl;

wherein Het<sup>2</sup> is defined as an aromatic monocyclic, bicyclic or tricyclic heterocycle consisting of 3 to 12 ring members comprising one or more heteroatom ring members selected from nitrogen, oxygen or sulfur and optionally substituted on one or more carbon atoms by alkyl, alkyloxy, halogen, hydroxyl, optionally mono-or disubstituted amino, nitro, cyano, haloalkyl, carboxyl, alkoxycarbonyl, cycloalkyl, optionally mono-or disubstituted aminocarbonyl, methylthio, methylsulfonyl, aryl, Het<sup>1</sup> and an aromatic monocyclic, bicyclic, or tricyclic heterocycle consisting of 3 to 12 ring members, whereby the optional substituents on any amino function are independently selected from alkyl, alkyloxy, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>oxy, Het<sup>1</sup>oxyalkyl, aryl, aryloxy, aryloxyalkyl, aralkyl, alkyloxycarbonylamino, amino, and amionalkyl whereby each of the amino groups may optionally be mono- or disubstituted with alkyl.

2. (Previously presented) A compound according to claim 1, having the formula I or a pharmaceutically acceptable salt thereof,

## formula I

$$R_4$$
 $R_5$ 
 $R_2$ 
 $R_1$ 
 $R_3$ 
 $R_3$ 

wherein R<sup>1</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkyloxy, alkyloxyalkyl, alkylthioalkyl, alkyloxycarbonyl, alkylthiocarbonyl, alkanoyl, cycloalkylalkyl,

Het<sup>2</sup>aryloxyalkyloxy,

Filed: December 23, 2005

cycloalkylcarbonyl, cycloalkylalkanoyl, cycloalkylthiocarbonyl,

cycloalkylalkoxythiocarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl, arylcarbonyloxyalkyl, cycloalkylcarbonyloxyalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, aryloxycarbonyl, arylthiocarbonyl, aralkoxycarbonyl, arylalkylthiocarbonyl, aryloxyalkyl, arylthioalkyl, haloalkyl, hydroxyalkyl, aralkanoyl, aroyl, aryloxycarbonylalkyl, aryloxyalkanoyl, carboxyl, formyl, alkenylcarbonyl, alkynylcarbonyl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>aryl, Het<sup>1</sup>aralkyl, Het<sup>1</sup>cycloalkyl, Het<sup>1</sup>carbonyl, Het<sup>1</sup>alkoxycarbonyl, Het<sup>1</sup>alkylthiocarbonyl, Het<sup>1</sup>oxycarbonyl, Het<sup>1</sup>aralkanoyl, Het<sup>1</sup>aryloxyalkyl, Het<sup>1</sup>alkanovl, Het<sup>1</sup>alkyloxyalkyl, Het<sup>1</sup>thiocarbonyl. Het<sup>1</sup>arylthioalkyl, Het<sup>1</sup>aryloxycarbonyl, Het<sup>1</sup>aralkoxycarbonyl, Het<sup>1</sup>aroyl, Het<sup>1</sup>oxyalkylcarbonyl, Het<sup>1</sup>carbonyloxyalkyl, Het<sup>1</sup>aryloxyalkylcarbonyl, Het<sup>1</sup>alkyloxyalkylcarbonyl, Het<sup>2</sup>alkyl; Het<sup>2</sup>oxyalkyl, Het<sup>1</sup>alkylcarbonyloxyalkyl, Het<sup>1</sup>aralkylcarbonyloxyalkyl, Het<sup>2</sup>alkyloxyalkyl, Het<sup>2</sup>aralkyl, Het<sup>2</sup>carbonyl, Het<sup>2</sup>oxycarbonyl, Het<sup>2</sup>thiocarbonyl, Het<sup>2</sup>alkanoyl, Het<sup>2</sup>alkoxycarbonyl, Het<sup>2</sup>aralkanoyl, Het<sup>2</sup>aralkoxycarbonyl, Het<sup>2</sup>alkylthiocarbonyl, Het<sup>2</sup>aryloxycarbonyl, Het<sup>2</sup>aroyl, Het<sup>2</sup>aryloxyalkyl, Het<sup>2</sup>arylthioalkyl, Het<sup>2</sup>oxyalkylcarbonyl, Het<sup>2</sup>aryloxyalkylcarbonyl, Het<sup>2</sup>carbonyloxyalkyl, Het<sup>2</sup>alkyloxyalkylcarbonyl, Het<sup>2</sup>alkylcarbonyloxyalkyl, Het<sup>2</sup>aralkylcarbonyloxyalkyl, cyano, aminocarbonyl, aminoalkanoyl, aminoalkyl, CR<sup>6</sup>=NR<sup>7</sup> and CR<sup>6</sup>=N(OR<sup>7</sup>), with R<sup>6</sup> and R<sup>7</sup> being independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup> alkyl, Het<sup>1</sup> aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are independently selected from the group consisting of hydroxyl, alkyloxy, alkylsilyloxy, arylsilyloxy, alkyloxyalkyloxy, cycloalkyloxy cycloalkylalkyloxy, alkylcarbonyloxy, arvlcarbonyloxy, cycloalkylcarbonyloxy, aryloxyalkyloxy, silyloxy, haloalkyloxy, hydroxyalkyloxy, aralkanoyloxy, aroyloxy, aryloxycarbonylalkyloxy, formyloxy, Het<sup>1</sup>alkyloxy, Het<sup>1</sup>oxy, Het<sup>1</sup>oxyalkyloxy, Het<sup>1</sup>aryloxy, Het<sup>1</sup>aralkyloxy, Het<sup>1</sup>cycloalkyloxy, Het<sup>1</sup>oxycarbonyloxy, Het<sup>1</sup>alkanoyloxy, Het aralkanoyloxy, Het<sup>1</sup>carbonyloxy, Het<sup>1</sup>aryloxyalkyloxy, Het<sup>1</sup>aroyl, Het<sup>2</sup>oxy, Het<sup>2</sup>alkyloxy; Het<sup>2</sup>oxyalkyloxy, Het<sup>2</sup>aralkyloxy,

cycloalkylalkoxycarbonyl,

Het<sup>2</sup>cycloalkyloxy, Het<sup>2</sup>alkanoyloxy, Het<sup>2</sup>aralkanoyloxy, Het<sup>2</sup>carbonyloxyl, Het<sup>2</sup>aryloxy, and

Filed: December 23, 2005

wherein R<sup>1</sup> R<sup>2</sup> and R<sup>3</sup> are unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het1, Het2, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, aryloxyalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkoxy, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>,  $S(O)R^8$ ,  $SO_2R^8$ ,  $CR^8=N(OR^9)$ ,  $N_3$ ,  $NO_2$ ,  $NR^8R^9$ ,  $N(OH)R^8$ ,  $C(O)R^8$ ,  $C(S)R^8$ ,  $CO_2R^8$ ,  $C(O)SR^8$ ,  $C(O)NR^8R^9$ ,  $C(S)NR^8R^9$ ,  $C(O)N(OH)R^9$ ,  $C(S)N(OH)R^8$ ,  $NR^8C(O)R^9$ ,  $NR^8C(S)R^9$ ,  $N(OH)C(O)R^9$ ,  $N(OH)C(S)R^8$ ,  $NR^8CO_2R^9$ ,  $NR^8C(O)NR^9R^{10}$ ,  $NR^8C(S)NR^9R^{10}$ ,  $N(OH)CO_2R^8$ ,  $NR^8C(O)SR^9$ ,  $N(OH)C(O)NR^8R^9$ ,  $N(OH)C(S)NR^8R^9$ ,  $NR^8C(O)N(OH)R^9$ ,  $NR^8C(S)N(OH)R^9$ , NR<sup>8</sup>SO<sub>2</sub>R<sup>9</sup>, NHSO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;

wherein R<sup>4</sup> is oxo and R<sup>5</sup> is hydrogen or alkyl.

# 3. (Previously presented) A compound according to claim 1,

wherein R<sup>1</sup> is selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, alkenyl, alkynyl, alkyloxyalkyl, alkyloxyarbonyl, alkanoyl, cycloalkylalkyl, cycloalkylalkoxycarbonyl, cycloalkylalkoxycarbonyl, cycloalkylalkoxycarbonyl, cycloalkylalkoxyalkyl, arylcarbonyloxyalkyl, cycloalkylalkoxycarbonyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, aryloxycarbonyl, aralkoxycarbonyl, arylthioalkyl, aralkanoyl, aroyl, carboxyl, formyl, alkenylcarbonyl, alkynylcarbonyl, Het¹oxyalkyl, Het¹alkoxycarbonyl, Het¹aryloxyalkyl, Het¹aryloxyalkyl, Het¹aryloxyarbonyl,

Filed : December 23, 2005

Het<sup>1</sup>aralkoxycarbonyl, Het<sup>1</sup>oxyalkylcarbonyl, Het<sup>1</sup>alkyloxyalkylcarbonyl, Het<sup>1</sup>aryloxyalkylcarbonyl, Het<sup>1</sup>carbonyloxyalkyl, Het<sup>1</sup>alkylcarbonyloxyalkyl, Het<sup>1</sup>aralkylcarbonyloxyalkyl, Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, Het<sup>2</sup>oxycarbonyl, Het<sup>2</sup>aralkoxycarbonyl, Het<sup>2</sup>aryloxycarbonyl, Het<sup>2</sup>aryloxyalkyl, Het<sup>2</sup>alkoxycarbonyl, Het<sup>2</sup>arylthioalkyl, Het<sup>2</sup>oxyalkylcarbonyl, Het<sup>2</sup>alkyloxyalkylcarbonyl, Het<sup>2</sup>aryloxyalkylcarbonyl, Het<sup>2</sup>carbonyloxyalkyl, Het<sup>2</sup>alkylcarbonyloxyalkyl, Het<sup>2</sup>aralkylcarbonyloxyalkyl, CR<sup>6</sup>=NR<sup>7</sup>, and  $CR^6=N(OR^7)$ ,

with R<sup>6</sup> and R<sup>7</sup> being independently selected from the group consisting of hydrogen, hydroxyl, alkynyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, aminoalkyl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are independently selected from the group consisting of hydroxyl, alkyloxy, alkyloxyalkyloxy, cycloalkylakyloxy, aralkyloxy, aryloxyalkyloxy, silyloxy, alkylcarbonyloxy, arylcarbonyloxy, cycloalkylcarbonyloxy, aryloxycarbonylalkyloxy, formyloxy, Het<sup>1</sup>alkyloxy, Het<sup>1</sup>oxy, Het<sup>1</sup>oxyalkyloxy, Het<sup>1</sup>aryloxy, Het<sup>1</sup>aralkyloxy, Het<sup>1</sup>cycloalkyloxy, Het<sup>1</sup>aralkanoyloxy, Het<sup>1</sup>aryloxyalkyloxy, Het<sup>2</sup>oxy, Het<sup>1</sup>carbonyloxy, Het<sup>1</sup>alkanoyloxy, Het<sup>2</sup>alkyloxy, Het<sup>2</sup>oxyalkyloxy, Het<sup>2</sup>aralkyloxy, Het<sup>2</sup>cycloalkyloxy, Het<sup>2</sup>alkanoyloxy, Het<sup>2</sup>aralkanoyloxy, Het<sup>2</sup>carbonyloxyl, Het<sup>2</sup>aryloxy, and Het<sup>2</sup>aryloxyalkyloxy,

wherein R<sup>1</sup> R<sup>2</sup> and R<sup>3</sup> are unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het1, Het2, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O), hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkoxy, arylthioalkylamino, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>,  $S(O)R^8$ ,  $SO_2R^8$ ,  $CR^8=N(OR^9)$ ,  $N_3$ ,  $NO_2$ ,  $NR^8R^9$ ,  $N(OH)R^8$ ,  $C(O)R^8$ ,  $C(S)R^8$ ,  $CO_2R^8$ ,  $C(O)SR^8$ ,  $C(O)NR^8R^9$ ,  $C(S)NR^8R^9$ ,  $C(O)N(OH)R^9$ ,  $C(S)N(OH)R^8$ ,  $NR^8C(O)R^9$ ,  $NR^8C(S)R^9$ ,

Filed: December 23, 2005

 $N(OH)C(O)R^9,\ N(OH)C(S)R^8,\ NR^8CO_2R^9,\ NR^8C(O)NR^9R^{10},\ NR^8C(S)NR^9R^{10},\ N(OH)CO_2R^8,\\ NR^8C(O)SR^9,\ N(OH)C(O)NR^8R^9,\ N(OH)C(S)NR^8R^9,\ NR^8C(O)N(OH)R^9,\ NR^8C(S)N(OH)R^9,\\ NR^8SO_2R^9,\ NHSO_2NR^8R^9,\ NR^8SO_2NHR^9,\ and\ P(O)(OR^8)(OR^9),$ 

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; and

wherein R<sup>4</sup> is selected from the group consisting of, oxo, hydroxyalkyl, alkyl, alkenyl, alkylcarbonylalkyl, arylcarbonylalkyl and R<sup>5</sup> is hydrogen, oxo, hydroxyl, hydroxyalkyl, alkyl, alkyl, alkylcarbonylalkyl, arylcarbonylalkyl.

# 4. (Previously presented) A compound according to claim 1 or 2,

wherein R<sup>1</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkyloxyalkyl, cycloalkylalkyl, cycloalkylcarbonyl, alkylthioalkyl, alkyloxycarbonyl, alkanovl, cycloalkylalkoxycarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl, cycloalkylalkanoyl, aralkyl, arylalkenyl, cycloalkylcarbonyloxyalkyl, silyloxyalkyl, arylcarbonyloxyalkyl, arylcarbonyl, aryloxycarbonyl, aralkoxycarbonyl, arylthioalkyl, aralkanoyl, aroyl, carboxyl, formyl, alkenylcarbonyl, alkynylcarbonyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>alkoxycarbonyl, Het<sup>1</sup>oxycarbonyl, Het<sup>1</sup>arylthioalkyl, Het<sup>1</sup>alkyloxyalkyl, Het aryloxycarbonyl, Het aryloxyalkyl, Het<sup>1</sup>alkyloxyalkylcarbonyl, Het<sup>1</sup>aralkoxycarbonyl, Het<sup>1</sup>oxyalkylcarbonyl, Het<sup>1</sup>alkylcarbonyloxyalkyl, Het<sup>1</sup>aryloxyalkylcarbonyl, Het<sup>1</sup>carbonyloxyalkyl, Het<sup>1</sup>aralkylcarbonyloxyalkyl, Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, Het<sup>2</sup>oxycarbonyl, Het<sup>2</sup>aryloxyalkyl, Het<sup>2</sup>alkoxycarbonyl, Het<sup>2</sup>aralkoxycarbonyl, Het<sup>2</sup>aryloxycarbonyl, Het<sup>2</sup>arylthioalkyl, Het<sup>2</sup>oxyalkylcarbonyl, Het<sup>2</sup>alkyloxyalkylcarbonyl, Het<sup>2</sup>aryloxyalkylcarbonyl, Het<sup>2</sup>carbonyloxyalkyl, Het<sup>2</sup>alkylcarbonyloxyalkyl, Het<sup>2</sup>aralkylcarbonyloxyalkyl, CR<sup>6</sup>=NR<sup>7</sup>, and  $CR^6=N(OR^7)$ .

with R<sup>6</sup> and R<sup>7</sup> being independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup> alkyl, Het<sup>1</sup> aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;

Filed: December 23, 2005

wherein R<sup>2</sup> and R<sup>3</sup> are independently selected from the group consisting of hydroxyl, alkyloxy, alkyloxy, cycloalkyloxy cycloalkylalkyloxy, aralkyloxy, aryloxyalkyloxy, silyloxy, alkylcarbonyloxy, aryloxyalkyloxy, silyloxy, alkylcarbonyloxy, aryloxyalkyloxy, formyloxy, Het¹alkyloxy, Het¹oxy, Het¹aryloxy, Het¹aralkyloxy, Het¹cycloalkyloxy, Het¹aralkanoyloxy, Het¹aryloxyalkyloxy, Het²oxy, Het²aryloxyalkyloxy, Het²aryloxyalkyloxy, Het²aryloxyalkyloxy, Het²aryloxyalkyloxy, Het²aryloxyalkyloxy, Het²aryloxyalkyloxy, Het²aryloxyalkyloxy, Het²aryloxyalkyloxy,

wherein R<sup>1</sup> R<sup>2</sup> and R<sup>3</sup> are unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het1, Het2, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)<sub>t</sub>, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkoxy, arylthioalkylamino, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>,  $S(O)R^8$ ,  $SO_2R^8$ ,  $CR^8=N(OR^9)$ ,  $N_3$ ,  $NO_2$ ,  $NR^8R^9$ ,  $N(OH)R^8$ ,  $C(O)R^8$ ,  $C(S)R^8$ ,  $CO_2R^8$ ,  $C(O)SR^8$ ,  $C(O)NR^8R^9$ ,  $C(S)NR^8R^9$ ,  $C(O)N(OH)R^9$ ,  $C(S)N(OH)R^8$ ,  $NR^8C(O)R^9$ ,  $NR^8C(S)R^9$ ,  $N(OH)C(O)R^{9},\ N(OH)C(S)R^{8},\ NR^{8}CO_{2}R^{9},\ NR^{8}C(O)NR^{9}R^{10},\ NR^{8}C(S)NR^{9}R^{10},\ N(OH)CO_{2}R^{8},$  $NR^8C(O)SR^9$ ,  $N(OH)C(O)NR^8R^9$ ,  $N(OH)C(S)NR^8R^9$ ,  $NR^8C(O)N(OH)R^9$ ,  $NR^8C(S)N(OH)R^9$ , NR<sup>8</sup>SO<sub>2</sub>R<sup>9</sup>, NHSO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;; and

wherein R<sup>4</sup> is oxo and R<sup>5</sup> is hydrogen or alkyl.

5. (Previously presented) A compound according to claim 1 or 2,

Filed: December 23, 2005

wherein R<sup>1</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkyloxyalkyl, alkylthioalkyl, alkanoyl, cycloalkylalkyl, cycloalkylalkyl, cycloalkylalkanoyl, cycloalkylthioalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, arylthioalkyl, aralkanoyl, aroyl, carboxyl, formyl, alkenylcarbonyl, alkynylcarbonyl, Het¹oxyalkyl, Het¹aryloxyalkyl, Het¹arylthioalkyl, Het¹oxyalkylcarbonyl, Het¹aryloxyalkylcarbonyl, Het²aryloxyalkylcarbonyl, Het²aryloxyalkyl, Het²aryloxyalkyl, Het²arylthioalkyl, Het²aryloxyalkylcarbonyl, Het²aryloxyalkylcarbonyl, CR<sup>6</sup>=NR<sup>7</sup>, and CR<sup>6</sup>=N(OR<sup>7</sup>),

with R<sup>6</sup> and R<sup>7</sup> being independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are independently selected from the group consisting of hydroxyl, alkylcarbonyloxy, arylcarbonyloxy, cycloalkylcarbonyloxy, formyloxy, Het<sup>1</sup>carbonyloxy, Het<sup>1</sup>aralkanoyloxy, Het<sup>2</sup>aralkanoyloxy, and Het<sup>2</sup>aralkanoyloxy,

wherein R<sup>1</sup> R<sup>2</sup> and R<sup>3</sup> are unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)<sub>t</sub>, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, aralkylthio, aryloxyalkylthio, arylthioalkoxy, arylthioalkylamino, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>,  $S(O)R^8$ ,  $SO_2R^8$ ,  $CR^8=N(OR^9)$ ,  $N_3$ ,  $NO_2$ ,  $NR^8R^9$ ,  $N(OH)R^8$ ,  $C(O)R^8$ ,  $C(S)R^8$ ,  $CO_2R^8$ ,  $C(O)SR^8$ ,  $C(S)NR^8R^9$ ,  $C(O)N(OH)R^9$ ,  $C(S)N(OH)R^8$ ,  $NR^8C(O)R^9$ ,  $NR^8C(S)R^9$ ,  $C(O)NR^8R^9$ ,  $N(OH)C(O)R^9$ ,  $N(OH)C(S)R^8$ ,  $NR^8CO_2R^9$ ,  $NR^8C(O)NR^9R^{10}$ ,  $NR^8C(S)NR^9R^{10}$ ,  $N(OH)CO_2R^8$ ,

Filed: December 23, 2005

 $NR^8C(O)SR^9$ ,  $N(OH)C(O)NR^8R^9$ ,  $N(OH)C(S)NR^8R^9$ ,  $NR^8C(O)N(OH)R^9$ ,  $NR^8C(S)N(OH)R^9$ ,  $NR^8SO_2R^9$ ,  $NHSO_2NR^8R^9$ ,  $NR^8SO_2NHR^9$ , and  $P(O)(OR^8)(OR^9)$ ,

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;; and

wherein R<sup>4</sup> is oxo and R<sup>5</sup> is hydrogen or alkyl.

(Previously presented) A compound according to claims 1 or 2 wherein R<sup>1</sup> is selected 6. from the group consisting of alkyl, alkenyl, alkynyl, alkyloxyalkyl, alkylthioalkyl, cycloalkylalkyl, cycloalkylthioalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylthioalkyl, carboxyl, formyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>aryloxyalkyl, Het<sup>1</sup>alkyloxyalkyl, Het<sup>1</sup>arylthioalkyl, Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, Het<sup>2</sup>aryloxyalkyl, and Het<sup>2</sup>arylthioalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, alkylthio, arylthioalkoxy, aralkylthio, arylthioalkylamino, aryloxyalkylthio, arylaminoalkylamino, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>1</sup> alkylthio, Het<sup>2</sup> alkylthio, Het<sup>1</sup> oxy and Het<sup>2</sup> oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN,  $CR^8 = NR^9$ ,  $S(O)R^8$ ,  $SO_2R^8$ ,  $CR^8 = N(OR^9)$ ,  $N_3$ ,  $NO_2$ ,  $NR^8R^9$ ,  $N(OH)R^8$ ,  $C(O)R^8$ ,  $C(S)R^8$ ,  $CO_2R^8$ ,  $C(O)SR^{8}$ ,  $C(O)NR^{8}R^{9}$ ,  $C(S)NR^{8}R^{9}$ ,  $C(O)N(OH)R^{9}$ ,  $C(S)N(OH)R^{8}$ ,  $NR^{8}C(O)R^{9}$ ,  $NR^{8}C(S)R^{9}$ ,  $N(OH)C(O)R^9$ ,  $N(OH)C(S)R^8$ ,  $NR^8CO_2R^9$ ,  $NR^8C(O)NR^9R^{10}$ ,  $NR^8C(S)NR^9R^{10}$ ,  $N(OH)CO_2R^8$ ,  $NR^8C(O)SR^9$ ,  $N(OH)C(O)NR^8R^9$ ,  $N(OH)C(S)NR^8R^9$ ,  $NR^8C(O)N(OH)R^9$ ,  $NR^8C(S)N(OH)R^9$ , NR<sup>8</sup>SO<sub>2</sub>R<sup>9</sup>, NHSO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl,

Filed: December 23, 2005

alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein  $R^2$  and  $R^3$  are hydroxyl and wherein  $R^4$  is oxo and  $R^5$  is hydrogen.

(Previously presented) A compound according to claims 1 or 2, wherein R1 is selected 7. from the group consisting of alkyl, alkenyl, alkynyl, alkyloxyalkyl, cycloalkylalkyl, silyloxyalkyl, aralkyl, arylalkenyl, carboxyl, formyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>aryloxyalkyl, Het<sup>1</sup>alkyloxyalkyl, Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, and Het<sup>2</sup>aryloxyalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, aryloxyalkoxy, alkylthio, alkoxy, aralkylthio, aryloxyalkylthio, arylthioalkoxy, arylthioalkylamino, arylaminoalkylamino, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het1, Het2, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR8=NR9, S(O)R8, SO<sub>2</sub>R8, CR8=N(OR9), N<sub>3</sub>, NO<sub>2</sub>, NR8R9, N(OH)R8, C(O)R8, C(S)R8, CO<sub>2</sub>R8,  $C(O)SR^{8}$ ,  $C(O)NR^{8}R^{9}$ ,  $C(S)NR^{8}R^{9}$ ,  $C(O)N(OH)R^{9}$ ,  $C(S)N(OH)R^{8}$ ,  $NR^{8}C(O)R^{9}$ ,  $NR^{8}C(S)R^{9}$ ,  $N(OH)C(O)R^9$ ,  $N(OH)C(S)R^8$ ,  $NR^8CO_2R^9$ ,  $NR^8C(O)NR^9R^{10}$ ,  $NR^8C(S)NR^9R^{10}$ ,  $N(OH)CO_2R^8$ ,  $NR^8C(O)SR^9$ ,  $N(OH)C(O)NR^8R^9$ ,  $N(OH)C(S)NR^8R^9$ ,  $NR^8C(O)N(OH)R^9$ ,  $NR^8C(S)N(OH)R^9$ , NR<sup>8</sup>SO<sub>2</sub>R<sup>9</sup>, NHSO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are hydroxyl, R<sup>4</sup> is oxo and R<sup>5</sup> is hydrogen.

8. (Previously presented) A compound according to claims 1 or 2, wherein  $R^1$  is selected from the group consisting of alkyl, carboxyl, formyl; wherein  $R^2$  and  $R^3$  are hydroxyl, and wherein  $R^4$  is oxo and  $R^5$  is hydrogen.

Filed: December 23, 2005

9. (Original) A compound according to claim 8, wherein  $R^1$  is formyl,  $R^2$  and  $R^3$  are hydroxyl  $R^4$  is oxo and  $R^5$  is hydrogen.

10. (Previously presented) A compound according to claim 1 or 3,

wherein R<sup>1</sup> is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, alkyloxyalkyl, hydroxyalkyl, alkylthioalkyl, alkanoyl, cycloalkylalkyl, cycloalkylcarbonyl, cycloalkylalkanoyl, cycloalkylthioalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, arylthioalkyl, aralkanoyl, aroyl, carboxyl, formyl, alkenylcarbonyl, alkynylcarbonyl, Het¹aryloxyalkyl, Het¹aryloxyalkyl, Het¹aryloxyalkyl, Het¹aryloxyalkyl, Het¹aryloxyalkyl, Het²aryloxyalkyl, Het²aryloxyalkyl, Het²aryloxyalkyl, Het²aryloxyalkyl, Het²aryloxyalkyl, Het²aryloxyalkyl, Het²aryloxyalkyl, Het²aryloxyalkyl, Het²aryloxyalkyl, Het²aryloxyalkylcarbonyl, Het²aryloxyalkylcarbonyl, CR<sup>6</sup>=NR<sup>7</sup>, and CR<sup>6</sup>=N(OR<sup>7</sup>),

with R<sup>6</sup> and R<sup>7</sup> being independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are independently selected from the group consisting of hydroxyl, alkylcarbonyloxy, arylcarbonyloxy, cycloalkylcarbonyloxy, formyloxy, Het<sup>1</sup>carbonyloxy, Het<sup>1</sup>aralkanoyloxy, Het<sup>2</sup>aralkanoyloxy, and Het<sup>2</sup>aralkanoyloxy,

wherein R<sup>1</sup> R<sup>2</sup> and R<sup>3</sup> are unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)<sub>t</sub>, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkylthio, alkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>alkylthio,

Filed: December 23, 2005

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;; and

wherein  $R^4$  is oxo, hydroxyalkyl, alkyl, alkenyl, arylcarbonylaryl, or alkylcarbonylalkyl and  $R^5$  is hydrogen or alkyl.

- 11. (Previously presented) A compound according to claim 1 or 3, wherein  $R^1$  is hydroxyalkyl,  $R^2$  and  $R^3$  are hydroxyl,  $R^4$  is oxo and  $R^5$  is hydrogen.
- (Previously presented) A compound according to claim 1 or 3, wherein R<sup>1</sup> is selected 12. from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, hydroxyalkyl, alkyloxyalkyl, cycloalkylthioalkyl, silyloxyalkyl, alkylthioalkyl, cycloalkylalkyl, aralkyl, Het<sup>1</sup>oxvalkyl, Het<sup>1</sup>aryloxyalkyl, Het<sup>1</sup>alkyloxyalkyl. formyl, arylthioalkyl, carboxyl, Het arylthioalkyl, Het oxyalkyl, Het alkyloxyalkyl, Het aryloxyalkyl, and Het arylthioalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het1, Het2, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylthio, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylaminoalkylthio, aralkylthio, aryloxyalkylthio, arylthioalkylthio, arylthioalkylamino, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino,

Filed: December 23, 2005

Het¹alkylamino, Het²alkylamino, Het¹thio, Het²thio, Het¹alkylthio, Het²alkylthio, Het¹oxy and Het²oxy, OR $^8$ , SR $^8$ , SO $_2$ NR $^8$ R $^9$ , SO $_2$ N(OH)R $^8$ , CN, CR $^8$ =NR $^9$ , S(O)R $^8$ , SO $_2$ R $^8$ , CR $^8$ =N(OR $^9$ ), N $_3$ , NO $_2$ , NR $^8$ R $^9$ , N(OH)R $^8$ , C(O)R $^8$ , C(S)R $^8$ , CO $_2$ R $^8$ , C(O)SR $^8$ , C(O)NR $^8$ R $^9$ , C(S)NR $^8$ R $^9$ , C(O)N(OH)R $^9$ , C(S)N(OH)R $^8$ , NR $^8$ C(O)R $^9$ , NR $^8$ C(S)R $^9$ , N(OH)C(O)R $^9$ , N(OH)C(S)R $^8$ , NR $^8$ CO $_2$ R $^9$ , NR $^8$ C(O)NR $^9$ R $^{10}$ , NR $^8$ C(S)NR $^9$ R $^{10}$ , N(OH)CO $_2$ R $^8$ , NR $^8$ C(O)SR $^9$ , N(OH)C(O)NR $^8$ R $^9$ , N(OH)C(S)NR $^8$ R $^9$ , NR $^8$ C(O)N(OH)R $^9$ , NR $^8$ C(S)N(OH)R $^9$ , NR $^8$ C(S)N(OH)R $^9$ , NR $^8$ SO $_2$ R $^9$ , NHSO $_2$ NR $^8$ R $^9$ , NR $^8$ SO $_2$ NHR $^9$ , and P(O)(OR $^8$ )(OR $^9$ ),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are hydroxyl and wherein R<sup>4</sup> is hydroxyalkyl, arylcarbonylalkyl, or alkylcarbonylalkyl and R<sup>5</sup> is hydrogen.

(Previously presented) A compound according to claim 1 or 3, wherein R<sup>1</sup> is selected 13. from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, hydroxyalkyl, alkyloxyalkyl, silvloxvalkyl, aralkyl, arylalkenyl, carboxyl, formyl, Het<sup>1</sup>oxyalkyl, cycloalkylalkyl. Het<sup>1</sup>aryloxyalkyl, Het<sup>1</sup>alkyloxyalkyl, Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, and Het<sup>2</sup>aryloxyalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylthio, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup> alkylamino, Het<sup>2</sup> alkylamino, Het<sup>1</sup> thio, Het<sup>2</sup> thio, Het<sup>1</sup> alkylthio, Het<sup>2</sup> alkylthio, Het<sup>1</sup> oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>, S(O)R<sup>8</sup>, SO<sub>2</sub>R<sup>8</sup>, CR<sup>8</sup>=N(OR<sup>9</sup>), N<sub>3</sub>,  $NO_2$ ,  $NR^8R^9$ ,  $N(OH)R^8$ ,  $C(O)R^8$ ,  $C(S)R^8$ ,  $CO_2R^8$ ,  $C(O)SR^8$ ,  $C(O)NR^8R^9$ ,  $C(S)NR^8R^9$ ,  $C(O)N(OH)R^9$ ,  $C(S)N(OH)R^8$ ,  $NR^8C(O)R^9$ ,  $NR^8C(S)R^9$ ,  $N(OH)C(O)R^9$ ,  $N(OH)C(S)R^8$ ,

: 10/530,904

Filed

December 23, 2005

 $NR^8CO_2R^9, \quad NR^8C(O)NR^9R^{10}, \quad NR^8C(S)NR^9R^{10}, \quad N(OH)CO_2R^8, \quad NR^8C(O)SR^9, \\ N(OH)C(O)NR^8R^9, \quad N(OH)C(S)NR^8R^9, \quad NR^8C(O)N(OH)R^9, \quad NR^8C(S)N(OH)R^9, \quad NR^8SO_2R^9, \\ NHSO_2NR^8R^9, \quad NR^8SO_2NHR^9, \quad And \quad P(O)(OR^8)(OR^9), \\ NR^8SO_2NR^8R^9, \quad NR^8SO_2NHR^9, \quad NR^8SO_2NHR^9, \quad NR^8SO_2NHR^9, \\ NR^8SO_2NR^8R^9, \quad NR^8SO_2NHR^9, \quad NR^8SO_2NHR^9, \\ NR^8SO_2NR^9, \quad NR^8SO_2NR^9, \\ NR^8$ 

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are hydroxyl, R<sup>4</sup> is hydroxyalkyl, arylcarbonylalkyl, or alkylcarbonylalkyl and R<sup>5</sup> is hydrogen.

- 14. (Previously presented) A compound according to claim 1 or 3, wherein  $R^1$  is selected from the group consisting of alkyl, hydroxyalkyl, carboxyl, and formyl; wherein  $R^2$  and  $R^3$  are hydroxyl, and wherein  $R^4$  is arylcarbonylalkyl and  $R^5$  is hydrogen.
- 15. (Original) A compound according to claim 14, wherein  $R^1$  is hydroxyalkyl,  $R^2$  and  $R^3$  are hydroxyl,  $R^4$  is arylcarbonylalkyl and  $R^5$  is hydrogen.
- 16. (Original) A compound according to claim 15, wherein  $R^1$  is hydroxymethylene,  $R^2$  and  $R^3$  are hydroxyl,  $R^4$  is phenylcarbonylmethylene and  $R^5$  is hydrogen.
- 17. (Previously presented) A compound having the formula Ia or a pharmaceutically acceptable salt or ester thereof,

formula Ia

$$R_4$$
 $R_5$ 
 $R_1$ 
 $R_3$ 
 $R_4$ 
 $R_5$ 
 $R_4$ 
 $R_5$ 
 $R_4$ 
 $R_5$ 
 $R_4$ 
 $R_4$ 
 $R_5$ 

wherein R<sup>1</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkyloxyalkyl, alkylthioalkyl, alkyloxycarbonyl, alkanoyl, cycloalkylalkyl, cycloalkylcarbonyl,

Filed : December 23, 2005

cycloalkylalkanoyl, cycloalkylalkoxycarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl, cycloalkylcarbonyloxyalkyl, arylcarbonyloxyalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, aryloxycarbonyl, aralkoxycarbonyl, arylthioalkyl, aralkanoyl, aroyl, silyloxyalkyl, carboxyl, alkenylcarbonyl, alkynylcarbonyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>alkoxycarbonyl, Het<sup>1</sup>oxycarbonyl, Het<sup>1</sup>alkyloxyalkyl, Het<sup>1</sup> arylthioalkyl, Het<sup>1</sup> aryloxycarbonyl, Het<sup>1</sup> aryloxyalkyl, Het<sup>1</sup>alkyloxyalkylcarbonyl, Het<sup>1</sup>aralkoxycarbonyl, Het<sup>1</sup>oxyalkylcarbonyl, Het<sup>1</sup>aryloxyalkylcarbonyl, Het<sup>1</sup>carbonyloxyalkyl, Het<sup>1</sup>alkylcarbonyloxyalkyl, Het<sup>1</sup>aralkylcarbonyloxyalkyl, Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, Het<sup>2</sup>oxycarbonyl, Het<sup>2</sup>aryloxyalkyl, Het<sup>2</sup>alkoxycarbonyl, Het<sup>2</sup>aralkoxycarbonyl, Het<sup>2</sup>aryloxycarbonyl, Het<sup>2</sup> arylthioalkyl, Het<sup>2</sup> oxyalkylcarbonyl, Het<sup>2</sup> alkyloxyalkylcarbonyl, Het<sup>2</sup> aryloxyalkylcarbonyl, Het<sup>2</sup>carbonyloxyalkyl, Het<sup>2</sup>alkylcarbonyloxyalkyl, Het<sup>2</sup>aralkylcarbonyloxyalkyl, CR<sup>6</sup>=NR<sup>7</sup>, and  $CR^6=N(OR^7)$ ,

with R<sup>6</sup> and R<sup>7</sup> being independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup> alkyl, Het<sup>1</sup> alkyl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;

wherein R<sup>2</sup> and R<sup>3</sup> are independently selected from the group consisting of hydroxyl, alkyloxy, alkylsilyloxy, arylsilyloxy, alkyloxyalkyloxy, cycloalkyloxy cycloalkylalkyloxy, aryloxyalkyloxy, silyloxy, alkylcarbonyloxy, arylcarbonyloxy, aralkyloxy, haloalkyloxy, hydroxyalkyloxy, aralkanoyloxy, cycloalkylcarbonyloxy, aroyloxy, aryloxycarbonylalkyloxy, formyloxy, Hetlalkyloxy, Hetloxy, Hetloxy, Hetlaryloxy, Het<sup>1</sup>aralkyloxy, Het<sup>1</sup>cycloalkyloxy, Het<sup>1</sup>carbonyloxy, Het<sup>1</sup>oxycarbonyloxy, Het<sup>1</sup>alkanoyloxy, Het<sup>1</sup>aralkanoyloxy, Het<sup>1</sup>aryloxyalkyloxy, Het<sup>1</sup>aroyl, Het<sup>2</sup>oxy, Het<sup>2</sup>alkyloxy, Het<sup>2</sup>oxyalkyloxy, Het<sup>2</sup>aralkyloxy, Het<sup>2</sup>cycloalkyloxy, Het<sup>2</sup>alkanoyloxy, Het<sup>2</sup>aralkanoyloxy, Het<sup>2</sup>carbonyloxyl, Het<sup>2</sup>aryloxy, and Het<sup>2</sup>aryloxyalkyloxy;

wherein R<sup>1</sup> R<sup>2</sup> and R<sup>3</sup> are unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)<sub>t</sub>, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy,

: 10/530,904

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**December 23, 2005** 

aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylaminoalkylthio, arylaminoa

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;

wherein R<sup>4</sup> and R<sup>5</sup> are hydrogen or alkyl;

wherein Het<sup>1</sup> is defined as a saturated or partially unsaturated monocyclic, bicyclic or polycyclic heterocycle consisting of 3 to 12 ring members which comprise one or more heteroatom ring members selected from nitrogen, oxygen or sulfur, optionally substituted on one or more carbon atoms by alkyl, alkyloxy, halogen, hydroxyl, oxo, optionally mono- or disubstituted amino, nitro, cyano, haloalkyl, carboxyl, alkoxycarbonyl cycloalkyl, optionally mono- or disubstituted aminocarbonyl, methylthio, methylsulfonyl, aryl and a saturated or partially unsaturated monocyclic, bicyclic or tricyclic heterocycle consisting of 3 to 12 ring members which contain one or more heteroatom ring members selected from nitrogen, oxygen or sulfur and whereby the optional substituents on any amino function are independently selected from alkyl, alkyloxy, Het<sup>2</sup>, Het<sup>2</sup>alkyl, Het<sup>2</sup>oxy, Het<sup>2</sup>oxyalkyl, aryl, aryloxy, aryloxyalkyl, aralkyl, alkyloxycarbonylamino, amino and aminoalkyl whereby each of the amino groups may optionally be mono-or disubstituted with alkyl;

wherein Het<sup>2</sup> is defined as an aromatic monocyclic, bicyclic or tricyclic heterocycle consisting of 3 to 12 ring members comprising one or more heteroatom ring members selected from nitrogen, oxygen or sulfur and optionally substituted on one or more carbon atoms by alkyl, alkyloxy,

Filed: December 23, 2005

halogen, hydroxyl, optionally mono-or disubstituted amino, nitro, cyano, haloalkyl, carboxyl, alkoxycarbonyl, cycloalkyl, optionally mono-or disubstituted aminocarbonyl, methylthio, methylsulfonyl, aryl, Het<sup>1</sup> and an aromatic monocyclic, bicyclic, or tricyclic heterocycle consisting of 3 to 12 ring members, whereby the optional substituents on any amino function are independently selected from alkyl, alkyloxy, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>oxy, Het<sup>1</sup>oxyalkyl, aryl, aryloxy, aryloxyalkyl, aralkyl, alkyloxycarbonylamino, amino, and amionalkyl whereby each of the amino groups may optionally be mono- or disubstituted with alkyl.

## 18. (Previously presented) A compound according to claim 17,

wherein R<sup>1</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkyloxyalkyl, cycloalkylalkyl, cycloalkylcarbonyl, alkylthioalkyl, alkanoyl, cycloalkylalkanoyl, cycloalkylthioalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, arylthioalkyl, aralkanoyl, aroyl, silyloxyalkyl, carboxyl, alkenylcarbonyl, alkynylcarbonyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>aryloxyalkyl, Het arvlthioalkyl, Het<sup>1</sup>oxyalkylcarbonyl, Het<sup>1</sup>alkyloxyalkylcarbonyl, Het<sup>1</sup>alkvloxvalkvl. Het<sup>1</sup>aryloxyalkylcarbonyl, Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, Het<sup>2</sup>aryloxyalkyl, Het<sup>2</sup>arylthioalkyl, Het<sup>2</sup>oxyalkylcarbonyl, Het<sup>2</sup>alkyloxyalkylcarbonyl, Het<sup>2</sup>aryloxyalkylcarbonyl, CR<sup>6</sup>=NR<sup>7</sup>, and CR<sup>6</sup>=N(OR<sup>7</sup>), with R<sup>6</sup> and R<sup>7</sup> being independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup> alkyl, Het<sup>1</sup> aryl, alkenyl, alkynyl, aminoalkyl, alkylthiocarbonylamino aminoaryl, alkylcarbonylamino, arylcarbonylamino, and arylthiocarbonylamino;

wherein R<sup>2</sup> and R<sup>3</sup> are independently selected from the group consisting of hydroxyl, alkyloxy, alkylsilyloxy, arylsilyloxy, alkyloxyalkyloxy, cycloalkyloxy cycloalkylalkyloxy, alkylcarbonyloxy, arylcarbonyloxy, cycloalkylcarbonyloxy, aryloxyalkyloxy, silyloxy, haloalkyloxy, hydroxyalkyloxy, aralkanoyloxy, aroyloxy, aryloxycarbonylalkyloxy, formyloxy, Het<sup>1</sup>alkyloxy, Het<sup>1</sup>oxy, Het<sup>1</sup>oxyalkyloxy, Het<sup>1</sup>aryloxy, Het<sup>1</sup>aralkyloxy, Het<sup>1</sup>cycloalkyloxy, Het<sup>1</sup>oxycarbonyloxy, Het<sup>1</sup>alkanoyloxy, Het aralkanovloxy, Het<sup>1</sup>carbonyloxy, Het<sup>1</sup> aryloxyalkyloxy, Het<sup>1</sup> aroyl, Het<sup>2</sup> oxy, Het<sup>2</sup> alkyloxy; Het<sup>2</sup> oxyalkyloxy, Het<sup>2</sup> aralkyloxy, Het<sup>2</sup>cycloalkyloxy, Het<sup>2</sup>alkanoyloxy, Het<sup>2</sup>aralkanoyloxy, Het<sup>2</sup>carbonyloxyl, Het<sup>2</sup>aryloxy, and Het<sup>2</sup>aryloxyalkyloxy;

Filed: December 23, 2005

wherein R<sup>1</sup> R<sup>2</sup> and R<sup>3</sup> are unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het1, Het2, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arvloxvalkoxv. arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkoxy, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>,  $S(O)R^8$ ,  $SO_2R^8$ ,  $CR^8=N(OR^9)$ ,  $N_3$ ,  $NO_2$ ,  $NR^8R^9$ ,  $N(OH)R^8$ ,  $C(O)R^8$ ,  $C(S)R^8$ ,  $CO_2R^8$ ,  $C(O)SR^8$ ,  $C(S)NR^8R^9$ ,  $C(O)N(OH)R^9$ ,  $C(S)N(OH)R^8$ ,  $NR^8C(O)R^9$ ,  $NR^8C(S)R^9$ ,  $C(O)NR^8R^9$ ,  $N(OH)C(O)R^9$ ,  $N(OH)C(S)R^8$ ,  $NR^8CO_2R^9$ ,  $NR^8C(O)NR^9R^{10}$ ,  $NR^8C(S)NR^9R^{10}$ ,  $N(OH)CO_2R^8$ ,  $NR^8C(O)SR^9$ ,  $N(OH)C(O)NR^8R^9$ ,  $N(OH)C(S)NR^8R^9$ ,  $NR^8C(O)N(OH)R^9$ ,  $NR^8C(S)N(OH)R^9$ , NR<sup>8</sup>SO<sub>2</sub>R<sup>9</sup>, NHSO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;, and

wherein R<sup>4</sup> and R<sup>5</sup> are hydrogen or alkyl.

19. (Previously presented) A compound according to claim 17 or 18, wherein R<sup>1</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkyloxyalkyl, alkylthioalkyl, cycloalkylalkyl, cycloalkylthioalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylthioalkyl, silyloxyalkyl, carboxyl, Het¹oxyalkyl, Het¹aryloxyalkyl, Het¹arylthioalkyl, Het²arylthioalkyl, Het²aryloxyalkyl, Het²aryloxyalkyl, and Het²arylthioalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het¹, Het², cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)<sub>t</sub>, hydroxy, cyano, halogen and amino,

Filed: December 23, 2005

unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkylamino, arylthioalkylamino, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>, S(O)R<sup>8</sup>, SO<sub>2</sub>R<sup>8</sup>, CR<sup>8</sup>=N(OR<sup>9</sup>), N<sub>3</sub>, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup>, N(OH)R<sup>8</sup>, C(O)R<sup>8</sup>, C(S)R<sup>8</sup>, CO<sub>2</sub>R<sup>8</sup>, C(O)SR<sup>8</sup>, C(O)NR<sup>8</sup>R<sup>9</sup>, C(S)NR<sup>8</sup>R<sup>9</sup>, C(O)N(OH)R<sup>9</sup>, C(S)N(OH)R<sup>8</sup>, NR<sup>8</sup>C(O)R<sup>9</sup>, NR<sup>8</sup>C(S)R<sup>9</sup>, N(OH)C(O)R<sup>9</sup>, N(OH)C(S)R<sup>8</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>9</sup>, N(OH)C(S)NR<sup>8</sup>R<sup>9</sup>, N(OH)C(S)NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>C(O)N(OH)R<sup>9</sup>, NR<sup>8</sup>C(O)N(OH)R<sup>9</sup>, NR<sup>8</sup>C(O)N(OH)R<sup>9</sup>, NR<sup>8</sup>C(O)N(OH)R<sup>9</sup>, NR<sup>8</sup>C(O)N(OH)R<sup>9</sup>, NR<sup>8</sup>C(O)N(OH)R<sup>9</sup>, NR<sup>8</sup>C(O)N(OH)R<sup>9</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>9</sup>, NR<sup>8</sup>CO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are hydroxyl and wherein R<sup>4</sup> and R<sup>5</sup> are hydrogen or alkyl.

(Previously presented) A compound according to claim 17 or 18, wherein R<sup>1</sup> is selected 20. from the group consisting of alkyl, alkenyl, alkynyl, alkyloxyalkyl, cycloalkylalkyl, silyloxyalkyl, aralkyl, arvlalkenyl, carboxyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>aryloxyalkyl, Het<sup>1</sup>alkyloxyalkyl, Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, and Het<sup>2</sup>aryloxyalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het1, Het2, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkoxy, arylthioalkylamino,

Filed: December 23, 2005

arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>, S(O)R<sup>8</sup>, SO<sub>2</sub>R<sup>8</sup>, CR<sup>8</sup>=N(OR<sup>9</sup>), N<sub>3</sub>, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup>, N(OH)R<sup>8</sup>, C(O)R<sup>8</sup>, C(S)R<sup>8</sup>, CO<sub>2</sub>R<sup>8</sup>, C(O)SR<sup>8</sup>, C(O)NR<sup>8</sup>R<sup>9</sup>, C(S)NR<sup>8</sup>R<sup>9</sup>, C(O)N(OH)R<sup>8</sup>, NR<sup>8</sup>C(O)R<sup>9</sup>, NR<sup>8</sup>C(S)R<sup>9</sup>, N(OH)C(O)R<sup>9</sup>, N(OH)C(S)R<sup>8</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>9</sup>, NR<sup>8</sup>C(O)NR<sup>9</sup>R<sup>10</sup>, NR<sup>8</sup>C(S)NR<sup>9</sup>R<sup>10</sup>, N(OH)CO<sub>2</sub>R<sup>8</sup>, NR<sup>8</sup>C(O)SR<sup>9</sup>, N(OH)C(O)NR<sup>8</sup>R<sup>9</sup>, N(OH)C(S)NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>C(O)N(OH)R<sup>9</sup>, NR<sup>8</sup>C(S)N(OH)R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>R<sup>9</sup>, NHSO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are hydroxyl and wherein R<sup>4</sup> and R<sup>5</sup> are hydrogen.

21. (Previously presented) A compound having the formula Ib or a pharmaceutically acceptable salt or ester thereof,

### formula Ib

$$R_4$$
 $R_5$ 
 $R_2$ 
 $R_1$ 
 $R_3$ 

wherein R<sup>1</sup> is selected from the group consisting of alkenyl, alkynyl, alkyloxyalkyl, alkyloxycarbonyl, cycloalkylalkyl, cycloalkylcarbonyl, alkylthioalkyl, alkanoyl, cycloalkylalkanoyl, cycloalkylalkoxycarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl, arylcarbonyloxyalkyl, cycloalkylcarbonyloxyalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, aryloxycarbonyl, aralkoxycarbonyl, arylthioalkyl, aralkanoyl, aroyl, silyloxyalkyl, carboxyl, alkenylcarbonyl, alkynylcarbonyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>alkoxycarbonyl, Het<sup>1</sup>oxycarbonyl, Het<sup>1</sup>aryloxycarbonyl. Het<sup>1</sup>alkyloxyalkyl, Het<sup>1</sup>arylthioalkyl, Het<sup>1</sup> aryloxyalkyl,

Filed: December 23, 2005

Het<sup>1</sup> aralkoxycarbonyl, Het<sup>1</sup>oxyalkylcarbonyl, Het<sup>1</sup>alkyloxyalkylcarbonyl, Het<sup>1</sup>carbonyloxyalkyl, Het<sup>1</sup>alkylcarbonyloxyalkyl, Het<sup>1</sup>aryloxyalkylcarbonyl, Het<sup>2</sup>oxycarbonyl, Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, Het<sup>1</sup>aralkylcarbonyloxyalkyl, Het<sup>2</sup>aralkoxycarbonyl, Het<sup>2</sup>aryloxyalkyl, Het<sup>2</sup>alkoxycarbonyl, Het<sup>2</sup>aryloxycarbonyl, Het<sup>2</sup> arylthioalkyl, Het<sup>2</sup> oxyalkylcarbonyl, Het<sup>2</sup> alkyloxyalkylcarbonyl, Het<sup>2</sup> aryloxyalkylcarbonyl, Het<sup>2</sup>carbonyloxyalkyl, Het<sup>2</sup>alkylcarbonyloxyalkyl, Het<sup>2</sup>aralkylcarbonyloxyalkyl,CR<sup>6</sup>=NR<sup>7</sup>, and  $CR^6=N(OR^7)$ ,

with R<sup>6</sup> and R<sup>7</sup> being independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup> Het<sup>1</sup> alkyl, Het<sup>1</sup> aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino;

wherein R<sup>1</sup> is unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkoxy, arylthioalkylamino, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>,  $S(O)R^8$ ,  $SO_2R^8$ ,  $CR^8=N(OR^9)$ ,  $N_3$ ,  $NO_2$ ,  $NR^8R^9$ ,  $N(OH)R^8$ ,  $C(O)R^8$ ,  $C(S)R^8$ ,  $CO_2R^8$ ,  $C(O)SR^8$ ,  $C(O)NR^8R^9, \quad C(S)NR^8R^9, \quad C(O)N(OH)R^9, \quad C(S)N(OH)R^8, \quad NR^8C(O)R^9, \quad NR^8C(S)R^9, \quad NR$ N(OH)C(O)R<sup>9</sup>, N(OH)C(S)R<sup>8</sup>, NR<sup>8</sup>CO<sub>2</sub>R<sup>9</sup>, NR<sup>8</sup>C(O)NR<sup>9</sup>R<sup>10</sup>, NR<sup>8</sup>C(S)NR<sup>9</sup>R<sup>10</sup>, N(OH)CO<sub>2</sub>R<sup>8</sup>,  $NR^{8}C(O)SR^{9}$ ,  $N(OH)C(O)NR^{8}R^{9}$ ,  $N(OH)C(S)NR^{8}R^{9}$ ,  $NR^{8}C(O)N(OH)R^{9}$ ,  $NR^{8}C(S)N(OH)R^{9}$ , NR<sup>8</sup>SO<sub>2</sub>R<sup>9</sup>, NHSO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino, and

Filed: December 23, 2005

wherein R<sup>2</sup> and R<sup>3</sup> are hydroxyl and wherein R<sup>4</sup> is replaced by a double bond between the N atom and the C carbon atom of the N-containing heterocyclic ring of formula Ib; and wherein R<sup>5</sup> is hydrogen;

wherein Het¹ is defined as a saturated or partially unsaturated monocyclic, bicyclic or polycyclic heterocycle consisting of 3 to 12 ring members which comprise one or more heteroatom ring members selected from nitrogen, oxygen or sulfur, optionally substituted on one or more carbon atoms by alkyl, alkyloxy, halogen, hydroxyl, oxo, optionally mono- or disubstituted amino, nitro, cyano, haloalkyl, carboxyl, alkoxycarbonyl cycloalkyl, optionally mono- or disubstituted aminocarbonyl, methylthio, methylsulfonyl, aryl and a saturated or partially unsaturated monocyclic, bicyclic or tricyclic heterocycle consisting of 3 to 12 ring members which contain one or more heteroatom ring members selected from nitrogen, oxygen or sulfur and whereby the optional substituents on any amino function are independently selected from alkyl, alkyloxy, Het² , Het²alkyl, Het²oxy, Het²oxyalkyl, aryl, aryloxy, aryloxyalkyl, aralkyl, alkyloxycarbonylamino, amino and aminoalkyl whereby each of the amino groups may optionally be mono-or disubstituted with alkyl;

wherein Het<sup>2</sup> is defined as an aromatic monocyclic, bicyclic or tricyclic heterocycle consisting of 3 to 12 ring members comprising one or more heteroatom ring members selected from nitrogen, oxygen or sulfur and optionally substituted on one or more carbon atoms by alkyl, alkyloxy, halogen, hydroxyl, optionally mono-or disubstituted amino, nitro, cyano, haloalkyl, carboxyl, alkoxycarbonyl, cycloalkyl, optionally mono-or disubstituted aminocarbonyl, methylthio, methylsulfonyl, aryl, Het<sup>1</sup> and an aromatic monocyclic, bicyclic, or tricyclic heterocycle consisting of 3 to 12 ring members, whereby the optional substituents on any amino function are independently selected from alkyl, alkyloxy, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>oxy, Het<sup>1</sup>oxyalkyl, aryl, aryloxy, aryloxyalkyl, aralkyl, alkyloxycarbonylamino, amino, and amionalkyl whereby each of the amino groups may optionally be mono- or disubstituted with alkyl.

22. (Previously presented) A compound according to claim 21, wherein R<sup>1</sup> is selected from the group consisting of alkenyl, alkynyl, alkyloxyalkyl, cycloalkylalkyl, silyloxyalkyl, aralkyl, arylalkenyl, carboxyl, Het¹oxyalkyl, Het¹aryloxyalkyl, Het¹alkyloxyalkyl, Het²oxyalkyl, Het²alkyloxyalkyl, and Het²aryloxyalkyl, unsubstituted or substituted by one or more substituents

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**December 23, 2005** 

independently selected from the group consisting of alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arvloxvalkoxv. arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>8</sup>, SR<sup>8</sup>, SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, SO<sub>2</sub>N(OH)R<sup>8</sup>, CN, CR<sup>8</sup>=NR<sup>9</sup>,  $S(O)R^8$ ,  $SO_2R^8$ ,  $CR^8=N(OR^9)$ ,  $N_3$ ,  $NO_2$ ,  $NR^8R^9$ ,  $N(OH)R^8$ ,  $C(O)R^8$ ,  $C(S)R^8$ ,  $CO_2R^8$ ,  $C(O)SR^8$ ,  $C(S)NR^8R^9$ ,  $C(O)N(OH)R^9$ ,  $C(S)N(OH)R^8$ ,  $NR^8C(O)R^9$ ,  $NR^8C(S)R^9$ ,  $N(OH)C(O)R^9,\ N(OH)C(S)R^8,\ NR^8CO_2R^9,\ NR^8C(O)NR^9R^{10},\ NR^8C(S)NR^9R^{10},\ N(OH)CO_2R^8,$  $NR^8C(O)SR^9$ ,  $N(OH)C(O)NR^8R^9$ ,  $N(OH)C(S)NR^8R^9$ ,  $NR^8C(O)N(OH)R^9$ ,  $NR^8C(S)N(OH)R^9$ , NR<sup>8</sup>SO<sub>2</sub>R<sup>9</sup>, NHSO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, NR<sup>8</sup>SO<sub>2</sub>NHR<sup>9</sup>, and P(O)(OR<sup>8</sup>)(OR<sup>9</sup>),

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino; wherein R<sup>2</sup> and R<sup>3</sup> are hydroxyl and wherein R<sup>4</sup> and R<sup>5</sup> are hydrogen.

23. (Previously presented) A compound according to claim 22, wherein R<sup>1</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, alkyloxyalkyl, cycloalkylalkyl, silyloxyalkyl, aralkyl, arylalkenyl, carboxyl, Het¹oxyalkyl, Het¹aryloxyalkyl, Het¹alkyloxyalkyl, Het²oxyalkyl, Het²alkyloxyalkyl, and Het²aryloxyalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het¹, Het², cycloalkyl, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen and amino, unsubstituted, mono- or disubstituted wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy,

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10/530,904

Filed

**December 23, 2005** 

aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylami

with t being an integer between 1 and 2, and R<sup>8</sup> R<sup>9</sup> and R<sup>10</sup> being each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino, alkylthiocarbonylamino and arylthiocarbonylamino, wherein R<sup>2</sup> and R<sup>3</sup> are hydroxyl; wherein R<sup>4</sup> is replaced by a double bond between the N atom and the C carbon atom of the N-containing heterocyclic ring of formula Ib; and wherein R<sup>5</sup> is hydrogen.

## 24-25. (Cancelled)

- 26. (Previously presented) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound according to any one of claims 1, 17 and 21.
- 27. (Original) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound according to claim 9.
- 28. (Original) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound according to claim 11.

## 29. (Cancelled)

: 10/530,904

Filed

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**December 23, 2005** 

30. (Currently amended) A method of treating cancer comprising administering a compound according to any one of claims 1, 17, and 21 to an individual in need of such treatment, wherein the cancer is selected from the group consisting of lung cancer, breast cancer, melanoma cancer, glioma, colon cancer, bladder cancer, and prostate cancer and pancreatic cancer.

## 31. (Cancelled)

32. (Currently amended) A method of treating cancer comprising administrating to an individual in need of such treatment a pharmaceutical composition according to claim 26, wherein the cancer is selected from the group consisting of lung cancer, breast cancer, melanoma cancer, glioma, colon cancer, bladder cancer, and prostate cancer-and panereatic cancer.